

CLASS 51, ABRASIVE TOOL MAKING PROCESS, MATERIAL, OR COMPOSITION

SECTION I - CLASS DEFINITION

This is the class of:

Making an abrading tool, expressed as a process, material, or composition; which tool is comprised of randomly situated sharp edges of a mass of natural or manmade (synthetic) mineral crystals; or

A material or composition designed for an abrading purpose if not provided for elsewhere. In the definitions of this class, the term “material” or “composition” is intended to include an abrasive tool distinguished solely by the abrasive material or composition incorporated therein.

- (1) Note. In general, a chemical compound which may be used as an abradant, or a method of preparing such a compound, is classified elsewhere on the basis of the compound or its method of preparation. Patents having all claims limited to an abrasive material which is a chemical compound are included within this group of subclasses (Class 51), together with patents directed to abrasive materials comprising compositions having a plurality of ingredients and their methods of preparation. An “abrasive” material expressed as a chemical compound is included within this class (Class 51). An “abrasive” material comprised of a composition of a plurality of ingredients or a method of preparation of such a composition is included herein.

SECTION II - REFERENCES TO OTHER CLASSES

The rules for determining Class placement of the Original Reference (OR) for claimed chemical compositions are set forth in the Class Definition of Class 252 in the section **LINES WITH OTHER CLASSES AND WITHIN THIS CLASS**, subsection **COMPOSITION CLASS SUPERIORITY**, which includes a hierarchical **ORDER OF SUPERIORITY FOR COMPOSITION CLASSES**.

SEE OR SEARCH CLASS:

- 44, Fuel and Related Compositions, subclass 643 for a match scratcher composition or structure.

- 100, Presses, subclasses 35+ for a method of compacting material not elsewhere provided for.
- 106, Compositions: Coating or Plastic, for a composition containing material intended to impart a coating to work, generally.
- 148, Metal Treatment, for a composition to remove material from metal by combined detergent and abrading action, and for a composition containing material intended to impart a coating to metallic work.
- 241, Solid Material Comminution or Disintegration, subclass 291 for a comminuting member distinguished by the composition thereof.
- 252, Compositions, for a compositions having various specified special use, property, or function. The rules for determining Class placement of the Original Reference (OR) for claimed chemical compositions are set forth in the Class Definition of Class 252 in the section **LINES WITH OTHER CLASSES AND WITHIN THIS CLASS**, subsection **COMPOSITION CLASS SUPERIORITY**, which includes a hierarchical **ORDER OF SUPERIORITY FOR COMPOSITION CLASSES**.
- 260, Chemistry of Carbon Compounds, for a chemical compound under that class definition which may be used as an abradant. See (1) Note.
- 264, Plastic and Nonmetallic Article Shaping or Treating: Processes, for a process of making an article which may be abrasive in nature involving molding within that class definition.
- 373, Industrial Electric Heating Furnaces, for a chemical compound under that class definition which may be used as an abradant. See (1) Note.
- 423, Chemistry of Inorganic Compounds, for a chemical compound under that class definition which may be used as an abradant. See (1) Note.
- 424, Drug, Bio-Affecting and Body Treating Compositions, subclasses 49+ for a dentifrice composition which may contain an abrasive; however, an abrasive composition for drilling teeth is classified in this class (51).
- 427, Coating Processes, for a coating process, generally.
- 428, Stock Material or Miscellaneous Articles, subclass 687 for metallic stock having a rough surface and cross-reference art collection 932 for such stock having an abrasive feature.
- 451, Abrading, for a process of or apparatus for using a tool made by the composition or method of Class 51.

- 508, Solid Anti-Friction Devices, Materials Therefor, Lubricant or Separant Compositions for Moving Solid Surfaces, and Miscellaneous Mineral oil Compositions, for compositions with components having a lubricating function.
- 510, Cleaning Compositions for Solid Surfaces, Auxiliary Compositions Therefor, or Processes of Preparing the Compositions, for compositions to remove material by combined detergent and abrading action.
- 520, -528, Synthetic Resins or Natural Rubbers, particularly Class 523, subclasses 149+ for a composition containing a synthetic resin having utility as a friction element or to a process of preparation thereof.

SUBCLASSES

293 MISCELLANEOUS:

This subclass is indented under the class definition. Miscellaneous abrasive tool making process, material, or composition .

294 BAG OR FILLED CLOTH:

This subclass is indented under the class definition. Subject matter including (a) a process of making an abrasive tool comprising a flexible wall container which flexible wall may be porous or (b) an abrasive tool of this type distinguished solely by the abrasive composition.

- (1) Note. An abrasive material or composition to be used inside a bag are not included in this subclass, but rather, will be found in subclasses 295 through 309, and 293.

SEE OR SEARCH CLASS:

- 451, Abrading, subclass 526 for a flexible abrasive tool.

295 IMPREGNATING OR COATING AN ABRASIVE TOOL:

This subclass is indented under the class definition. Subject matter including impregnating or coating a tool already embodying an abrasive and other material, or a composition for such use, wherein the coating or impregnating composition may contain additional abrasive material.

SEE OR SEARCH CLASS:

- 427, Coating Processes, for a process of coating in general.
- 428, Stock Material or Miscellaneous Articles, subclass 568 for metallic stock having a consolidated particulate phase impregnated with a continuous phase of a different metal.

296 PORE FORMING:

This subclass is indented under the class definition. Subject matter including (a) a process or tool defined thereby including forming pores or voids in the finished article or (b) an abrading tool composition including one or more materials which will form pores or voids therein.

SEE OR SEARCH CLASS:

- 106, Compositions: Coating or Plastic, particularly subclass 122, 601+, and 672+ for a pore forming composition.
- 366, Agitating, subclasses 10+ for a process of incorporating gas into mortar.
- 428, Stock Material or Miscellaneous Articles, subclass 550 for composite metallic stock comprising metal particles, at least one component of which has pores; subclass 566 for composite metallic stock having a component in which there are interconnected, unfilled pores; and subclass 613 for nonparticulate metallic material which is, at least in part, porous.
- 501, Compositions: Ceramic, subclass 39 and 80+ for a pore forming composition.
- 521, Synthetic Resins or Natural Rubbers, subclasses 50+ for a process of forming pores in synthetic resin or natural rubber.

297 LAMINATING:

This subclass is indented under the class definition. Subject matter including a laminating step, material, or compositions for use therein.

- (1) Note. For purposes of this classification, mere coating of an abrasive on a binder or on a backing member is not considered to be laminating.

SEE OR SEARCH CLASS:

- 156, Adhesive Bonding and Miscellaneous Chemical Manufacture, the generic home for a laminating process or apparatus for making an article other than an abrading tool.
- 428, Stock Material or Miscellaneous Articles, for a plural layer stock material product in the form of a web or sheet, see especially subclass 411.1 for a nonstructural laminate in which the composition of the layers is specified.
- 451, Abrading, subclasses 533+ for a laminated, flexible-member abrading tool, per se; and 544 for a laminated cylindrical, rigid abrading tool.

298 WITH SYNTHETIC RESIN:

This subclass is indented under the class definition. Subject matter including (a) a process involving the use of a synthetic resin or (b) an abrading material or composition including such synthetic resin.

SEE OR SEARCH CLASS:

- 520, Synthetic Resins or Natural Rubbers, for synthetic resins or natural rubbers, and composition thereof.

- (1) Note. For the purposes of this classification, the term "synthetic resin" has been interpreted as defined in Class 520.

299 WITH RUBBER OR REACTION PRODUCT THEREOF:

This subclass is indented under the class definition. Subject matter including (a) a process involving the use of rubber or a reaction product thereof or (b) an abrading material or composition including rubber or a reaction product thereof.

SEE OR SEARCH CLASS:

- 15, Brushing, Scrubbing, and General Cleaning, subclasses 424+ for an erasing implement having an erasive body of rubber, unmixed with crystalline particles which have sharp cutting edges; and see (1) Note in that subclass for the distinction between the erasers in Class 15 and those in Classes 51 and 451.

- 520, Synthetic Resins or Natural Rubbers, subclasses 1+ for a rubber or rubber composition in general.

300 WITH NATURAL RESIN OR REACTION PRODUCT THEREOF:

This subclass is indented under the class definition. Subject matter including (a) a process involving the use of one or more natural resins or a reaction product thereof or (b) an abrading material or composition including one or more natural resins or a reaction product thereof.

SEE OR SEARCH CLASS:

- 530, Chemistry: Natural Resins or Derivatives; Peptides or Proteins; Lignins or Reaction Products Thereof, subclasses 200+ for a natural resin in general or a reaction product thereof.

301 WITH PROTEIN OR REACTION PRODUCT THEREOF:

This subclass is indented under the class definition. Subject matter including (a) a process involving the use of protein material or reaction product thereof or (b) an abrading material or composition including protein material or reaction product thereof.

SEE OR SEARCH CLASS:

- 530, Chemistry: Natural Resins or Derivatives; Peptides or Proteins; Lignins or Reaction Products Thereof, subclasses 350+ for a protein or reaction product thereof in general.

302 WITH CARBOHYDRATE OR REACTION PRODUCT THEREOF:

This subclass is indented under the class definition. Subject matter including (a) a process involving the use of carbohydrate material or reaction product thereof or (b) an abrading material or composition including carbohydrate material or reaction product thereof.

SEE OR SEARCH CLASS:

- 536, Organic Compounds, subclasses 1.11+ for a carbohydrate or derivative thereof in general.

303 Cellulose or derivative thereof:

This subclass is indented under subclass 302. Subject matter including (a) a process involving the use of cellulose or a derivative thereof

or (b) a material or composition including cellulose or a derivative thereof.

SEE OR SEARCH CLASS:

536, Organic Compounds, subclasses 30+ and 56+ for a cellulose or derivative thereof in general.

304 WITH FATS, FATTY OILS OR FATTY OIL ACIDS AND SALTS THEREOF:

This subclass is indented under the class definition. Subject matter including (a) a process involving the use of fats, fatty oils or fatty oil acids and salts thereof or (b) a material or composition including fats, fatty oils or fatty oil acids and salts thereof.

SEE OR SEARCH CLASS:

260, Chemistry of Carbon Compounds, particularly subclass 398 for fats or fatty oils in general.

305 WITH ESTER-TYPE WAX, BITUMINOUS MATERIAL, OR TARRY RESIDUE:

This subclass is indented under the class definition. Subject matter including (a) a process involving the use of an ester type wax, bituminous material or tarry residue or (b) an abrading material or composition containing an ester-type wax, bituminous material, or tarry residue.

SEE OR SEARCH CLASS:

208, Mineral Oils: Processes and Products, subclasses 4+ and 22+ for asphalt, tar, or pitch, per se, or a mixture thereof with another mineral oil.

306 WITH HYDROCARBON:

This subclass is indented under the class definition. Subject matter including (a) a process involving the use of a hydrocarbon or (b) a material or composition including a hydrocarbon.

SEE OR SEARCH CLASS:

585, Chemistry of Hydrocarbon Compounds, for a hydrocarbon, per se, or a process of making a hydrocarbon.

307 WITH INORGANIC MATERIAL:

This subclass is indented under the class definition. Subject matter including (a) a process involving the use of inorganic material or (b) a material or composition including inorganic material.

SEE OR SEARCH CLASS:

423, Chemistry of Inorganic Compounds, subject matter under subclass 307 in which the inorganic material comprises clay, silica, or silicate.

308 Clay, silica, or silicate:

This subclass is indented under subclass 307. Subject matter in which the inorganic material comprises clay, silica, or a silicate.

309 Metal or metal oxide:

This subclass is indented under subclass 307. Subject matter in which the inorganic material comprises a metal or metal oxide.

SEE OR SEARCH CLASS:

29, Metal Working, subclasses 4.51+ for shredding metal or metal wool article making.

419, Powder Metallurgy Processes, for a method involving use of a sintering powder comprising a metal and a non-metal in the final product, especially subclasses 10+.

423, Chemistry of Inorganic Compounds, for an inorganic metal compound (e.g., comprised of a carbide and a nonmetal element (e.g., diamond, per se)) or a process for preparation of an inorganic metal compound involving a chemical reaction.

428, Stock Material or Miscellaneous Articles, subclass 564 and 565 for metallic stock material having a particulate metal component which contains non-metal particles; subclass 605 for steel wool, per se; and subclass 610 for metallic stock material having a composition gradient.

END